Phonological Awareness Role in the Treatment of Phonological Disorders

Dr. Nydia Bou – Universidad del Turabo Gurabo, PR
ASHA Convention 2009
Session Number/Code: 1280  Poster Board 225
November 19, 2009 8:00am
Phonological Awareness and Phonological Treatment

- Critical Age Hypothesis (Bishop and Adams, 1990)
  - If phonological disorders are not resolved before children's formal instruction in reading, they will be at risk of developing literacy skills difficulties.
• Research has demonstrated that children with phonological disorders score poorly in phonological awareness tasks (Larrivee & Catts, 1999 in Gillon 2000).
• Regardless of the evidence, the efficacy of phonological awareness intervention for school aged children with phonological disorders who are learning to read, has not been documented (Gillon, 2000).
Recomendations (Gillon, 2000)

- Phonological awareness intervention should be focused in the development of sound level skills (Brady et al., 1994; Brennan & Ireson, 1997; Cary & Verhaeghe, 1994; Lundberg, Frost, & Petersen, 1988).
- Phonological awareness activities should be integrated with sound-letter correspondence training (Cunningham, 1990; Hatcher, Hulme, & Ellis, 1994).
• A variety of phoneme analysis activities should be included with particular attention to phoneme segmentation skills (Ayres, 1995; O’Connor et al., 1993; Schneider et al., 1997; Torgesen et al., 1992).

• When working with sound-letter correspondence and phonological awareness tasks, manipulative should be included so that the child can interact and reflect over the phonological task (Cunningham, 1990; Defior & Tudela, 1994; Gillon & Dodd, 1995, 1997; Truch, 1994).
• A direct phonological awareness approach will have more benefits in the development of reading skills that an indirect approach (Ayres, 1995).

• For children with severe deficiencies an individual or small group approach is recommended (Byrne & Fielding-Barnsley, 1995; Torgesen, Wagner, & Rashotte, 1994).

• Phonological awareness intervention is more effective after an initial period of language intervention (Ayres, 1995).
Hodson (2003), recommends the design of a treatment protocol for children with phonological disorders to include:

1. The identification of patterns that are consistent.
2. Determine priorities taking into account:
   1. The patient
   2. Available time per week
   3. What will increase intelligibility in the less time possible
3. Select optimal targets
   1. Phonological patterns
   2. Phonemes
   3. Words
4. Facilitate the development of awareness
   1. Auditory
   2. Kinesthetic
   3. Semantic
5. Gradually increase complexity
6. Incorporate
   1. Slight amplification
   2. Tactile clues (as needed)
   3. Modeling
7. Facilitate phonological awareness skills
8. Incorporate pragmatics and other areas as needed including voice and fluency if required
Phonological Awareness and Reading

- Phonology is important for reading because:
  - A child’s recognition of his language phonological structure is what enables him to make connections between oral and written word forms.
Some of the reading requisites related to phonological awareness are (Stahl & Murray, 1994):

- Represent syllables with their onset-rhyme difference.
- Isolate phonemes at the beginning or at the end of a word.

Lewis & Freebairn (1991) establish that children with phonological disorders are at risk of reading and spelling difficulties at school and that these children may have special education needs.
Speech, reading, and writing acquisition require sound analysis which could be associated with linguistic and cognitive processes. Phonological processing and sound system knowledge have been employed to understand spelling and reading development (Hoffman & Norris, 1989).
• Liberman & Shankweiler (1985) establish that reading success is related to the degree that children are aware of underlying phonological structures.

• O’Conner & Jenkins (1999) point out that Kindergarten children performance in phonological awareness tasks, predict the differences that will exist in reading performance at the end of first grade and identifies those children who will be diagnosed with reading difficulties.
Catts & Kamhi, 1999; Vellutino et al., 1996 in Gillon (2000) establish that is clearly demonstrated that spoken language deficiencies are highly associated to reading difficulties and that they can even be considered the cause of failure of some children in the process of learning to read.
Phonological processing difficulties are the underlying foundations of dyslexia, specific language impairment and speech sound disorders (Rvachew, S. & Gillon, G. 2005).
Why use a combined treatment approach

- Most children start speech-language therapy services at the age of 4 (Castrogiovanni, 1999).
- Critical Age Hypothesis (Bishop & Adams, 1990).
- Gain intelligibility in the least time possible (Hodson, 2007, Williams & Bleile, 2003).
• 20% to 25% of children do not develop the necessary phonological awareness skills to make the connection between sounds and letters.
• Children with phonological disorders are at risk of developing phonological awareness and reading difficulties.
• As the curricular demands increase, these children could present with spelling and decoding difficulties near the third grade.
Longitudinal research has demonstrated that phonological awareness deficiencies of children with poor reading skills, persist through time and will not disappear with academic intervention alone (Gillon & Dodd, 1994; Manis et al., 1993; Snowling & Hulme, 1989; Bruck, 1992, 1993; Pratt & Brady, 1988 en Gillon, 2007).

PIEI (ASHA roles and responsibilities)
ASHA Roles and Responsibilities

- Appropriate roles and responsibilities for SLPs include, but are not limited to:
  - (a) preventing written language problems by fostering language acquisition and emergent literacy;
  - (b) identifying children at risk for reading and writing problems;
• (c) assessing reading and writing;
• (d) providing intervention and documenting outcomes for reading and writing; and
• (e) assuming other roles, such as providing assistance to general education teachers, parents, and students; advocating for effective literacy practices; and advancing the knowledge base.
Case study: using a combined approach

- 5 year old boy.
- Evaluation at the Universidad del Turabo Speech and Language Clinic.
- Two year history of previous speech-language therapy.
Case history:

- Previous intervention focused on motor aspects of speech production.
- Client evaded words where he could predict production problems.
- Only his close family could completely understand him.
- Kindergarten teacher was having problems understanding him in the classroom.
Evaluation results

- Phonological patterns present at the time of the evaluation:
  - Weak syllable deletion [fóno]-/telefono/
  - Fronting [pomél]-/komer/
  - Backing [kása]-/tasa/
  - Stopping [atúl]-/asul/
Client also presented with:

- Poor awareness of speech movements required for proper articulation.
- Low consciousness of meaning change resulting from the use of deviant phonological patterns.
- Average language skills two years under CA: (TVIP SS 86 AE 4;3; EOWPVT SS 95 AE 4;10 PLS-R SS 64 AE 3;3 PLS-E SS 60 AE 3;4 & PLS-T SS 58 AE 3;3).
Initial therapy objectives

1. Increase the awareness of phonological units embedded in the speech stream.
2. Eliminate deviated phonological patterns and facilitate the emergence of age-appropriate phonological pattern use.
Phonological awareness intervention included

- **Syllable segmentation**: how many parts are there in the word /eskwela/?

- **Auditory closure**: with a picture as a reference let’s say this is a... /ka ___/ and the client is expected to say /sa/ completing the syllable required for the word /kasa/.
• **Phoneme categorization**: presenting a set of words where one of the words starts with a different sound like /kasa/-/karö/-/tasa/-/kweŋto/, and asking the client to identify which initial sound is different.

• **Phoneme isolation**: which phoneme do you identify at the beginning of the word /kuβo/?
• **Syllable blending**: using drawings to facilitate matching; “This is the star. Where is the other star?” (The client points to the other star in the paper). “Here we have /tu/ (in the first star pointed by the clinician) and in the other star we have /βo/. What it says?” The child is expected to blend the two syllables from the two starts in order to produce /tuβo/.
• **Phoneme segmentation:** how many sounds are there in the word /de/? The client is expected to answer “two”.

• **Rhyming:** starting with only identifying rhymes, like for example: “/bolar/ /sonar/ do they rhyme?” and moving towards being able to produce rhymes.
• **Phoneme blending**: the clinician produces the phonemes of a particular word and the client is expected to blend the phonemes to create the word. “What word do you hear in: /m/-/o/-/n/-/o/?” The client is expected to answer: /mono/.

• **Phoneme completion**: with a picture as a referent, this is /__ amisa/. The client is expected to complete the word using the right phoneme (/k/ in this case) to produce the word /kamisa/.
Other areas of intervention

- Narratives.
- Answering questions regarding a short story.
- Auditory bombardment.
- Phonetic placement.
- Motor/Kinesthetic approaches.
- Minimal pair contrast therapy.
Results

- 18 weekly individual sessions of phonological awareness intervention (combined with the other areas as mentioned) over a 7 month period, resulted in the elimination of deviant phonological patterns.
- Overall speech intelligibility increase.
- No problems in pre-reading tasks reported at that moment by the kindergarten teacher.
References


